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Remarks:

The applicant has subsequently filed a sequence listing and declared, that it includes no new matter.

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(54) Nucleic acid encoding a human protein phosphatase

(57) The present invention relates to nucleic acids encoding a novel human protein phosphatase of the family of protein serine/threonine phosphatases. In particular, it relates to novel DNA sequences encoding serine/threonine protein phosphatase, to expression plasmids containing said nucleic acids, to host organisms transformed by said expression plasmids, to the production of said protein by culturing said transformant, to antibodies specifically binding to said phosphatase and to agonists and/or antagonists for said protein, and to antisense MP-19 nucleic acid. Furthermore, the invention relates to serine or threonine residues and epitopes comprising said residues dephosphorylated by said protein and pharmaceutical compositions comprising said protein or agonists or antagonists thereof for the treatment of diseases influenced by changes in phosphorylation which controls e.g. cell proliferation and/or differentiation, to diagnostic kits and to *in vitro* diagnostic methods for the detection of phosphorylation dependent diseases such as e.g. cancer.

Fig. 1

[illegible]